

REMARKS

In the Office Action, claims 1-5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ode et al. (U.S. Pat. Pub. No. 2001/0007435) in view of Hongo et al. (U.S. Pat. No. 6,931,239).

Ode (U.S. Pat. Pub. No. 2001/0007435) relates to a distortion compensation apparatus, especially in a digital predistortion for correcting the size of a distortion compensation coefficient in such a manner that a transit signal that has undergone distortion compensation will not exceed the dynamic range of a DA converter.

Hongo (U.S. Pat. No. 6,931,239) discloses a peak limiter for use in a system for amplifying a multi-carrier signal receives a baseband signal of each carrier of the multi-carrier signal.

However, Ode and Hondo do not suggest in a transmitter which adjusts the signal level of a multicarrier signal that the variation in level of the output signal can be suppressed according to the variation in level of the input signal, furthermore, the generation of nonlinear distortion can be prevented through the amplification in the power amplifier.

The present invention provides a transmitter that can averagedly suppress a variation in input level of a multicarrier signal to an amplifier according

to an increase or decrease in the number of the transmission carriers or a variation in input level of each carrier. Therefore, it has an advantage that the variation in level of the output signal can be suppressed according to the variation in level of the input signal. Furthermore, the generation of nonlinear distortion can be prevented through the amplification in the power amplifier. As a result, a high quality wireless communication can be realized.

Specifically, according to the present invention in claims 1, 2 and 3, a transmitter, which transmits a multicarrier signal obtained by combining multiple carriers through peak power suppression, band limitation, and quadrature modulation, performs carrier level adjustment for adjusting the signal level of each carrier after the digital signal process based on mean input power of the carrier and mean output power of the carrier after the digital signal process, performs multicarrier level adjustment for adjusting the signal level of the multicarrier signal based on mean input power of an identified carrier and mean output power of the identified carrier after the digital signal process, or performs both of the carrier level adjustment and the multicarrier level adjustment.

According to the present invention in claim 4, a transmitter adjusts the signal level of the multicarrier signal based on mean input power of the sum of all carriers and mean output power of the sum of all carriers.

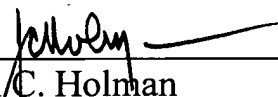
According to the present invention in claim 5, a transmitter adjusts the signal level of a peak power suppressed signal of a multicarrier based on mean input power before peak power suppression of the multicarrier and mean output power after the peak power suppression of the multicarrier.

Based on the foregoing amendments and remarks, it is respectfully submitted that the present application should now be in condition for allowance. A Notice of Allowance is in order, and such favorable action and reconsideration are respectfully requested.

However, if after reviewing the above amendments and remarks, the Examiner has any questions or comments, she is cordially invited to contact the undersigned attorneys.

Respectfully submitted,

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